- Focus on value Selecting what to optimize and automate and how to do so should be based on what will create the best value for the organization.
- Start where you are The technology already available in the organization may have features and functionalities that are currently untapped or under-utilized. Make use of what is already there to implement opportunities for optimization and automation quickly and economically.

4.3.8 Principle interaction

As well as being aware of the ITIL guiding principles, it is also important to recognize that they interact with and depend upon each other. For example, if an organization is committed to progressing iteratively with feedback, it should also think and work holistically to ensure that each iteration of an improvement includes all the elements necessary to deliver real results. Similarly, making use of appropriate feedback is key to collaboration, and focusing on what will truly be valuable to the customer makes it easier to keep things simple and practical.

Organizations should not use just one or two of the principles, but should consider the relevance of each of them and how they apply together. Not all principles will be critical in every situation, but they should all be reviewed on each occasion to determine how appropriate they are.

4.4 Governance

4.4.1 Governing bodies and governance

Key message

Every organization is directed by a governing body, i.e. a person or group of people who are accountable at the highest level for the performance and compliance of the organization. All sizes and types of organization perform governance activities; the governing body may be a board of directors or executive managers who take on a separate governance role when they are performing governance activities. The governing body is accountable for the organization's compliance with policies and any external regulations.

Organizational governance is a system by which an organization is directed and

controlled. Governance is realized through the following activities:

- Evaluate The evaluation of the organization, its strategy, portfolios, and relationships with other parties. The governing body evaluates the organization
- on a regular basis as stakeholders' needs and external circumstances evolve.
- Direct The governing body assigns responsibility for, and directs the preparation and implementation of, organizational strategy and policies. Strategies set the direction and prioritization for organizational activity, future investment, etc. Policies establish the requirements for behaviour across the organization and, where relevant, suppliers, partners, and other stakeholders.
- Monitor The governing body monitors the performance of the organization and its practices, products, and services. The purpose of this is to ensure that performance is in accordance with policies and direction.

Organizational governance evaluates, directs, and monitors all the organization's activities, including those of service management.

4.4.2 Governance in the SVS

The role and position of governance in the ITIL SVS depends on how the SVS is applied in an organization. The SVS is a universal model that can be applied to an organization as a whole, or to one or more of its units or products. In the latter case, some organizations delegate authority to perform governance activities at different levels. The governing body of the organization should retain oversight of this to ensure alignment with the objectives and priorities of the organization.

In ITIL 4, the guiding principles and continual improvement apply to all components of the SVS, including governance. In an organization, the governing body can adopt the ITIL guiding principles and adapt them, or define its own specific set of principles and communicate them across the organization. The governing body should also have visibility of the outcomes of continual improvement activities and the measurement of value for the organization and its stakeholders.

Regardless of the scope of the SVS and the positioning of the components, it is crucial to make sure that:

- the service value chain and the organization's practices work in line with the direction given by the governing body
- the governing body of the organization, either directly or through delegation of authority, maintains oversight of the SVS
- both the governing body and management at all levels maintain alignment through a clear set of shared principles and objectives
- the governance and management at all levels are continually improved to meet expectations of the stakeholders.

4.5 Service value chain

The central element of the SVS is the service value chain, an operating model which outlines the key activities required to respond to demand and facilitate value realization through the creation and management of products and services.

As shown in Figure 4.2, the ITIL service value chain includes six value chain activities which lead to the creation of products and services and, in turn, value.

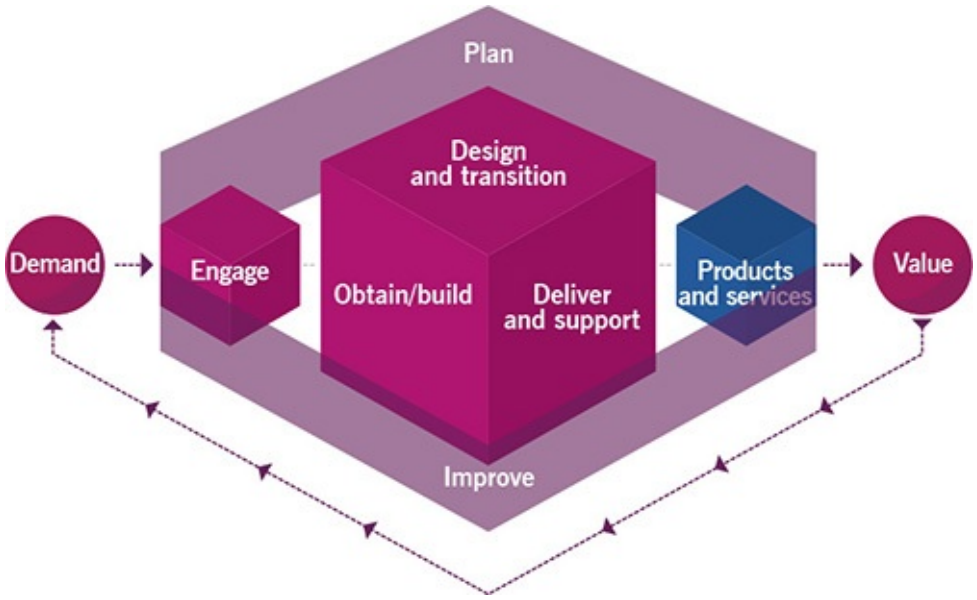

Figure 4.2 The ITIL service value chain

Key message

The six value chain activities are:

- plan
- improve
- engage
- design and transition
- obtain/build
- deliver and support.

These activities represent the steps an organization takes in the creation of value. Each activity transforms inputs into outputs. These inputs can be

demand from outside the value chain or outputs of other activities. All the activities are interconnected, with each activity receiving and providing triggers for further action.

To convert inputs into outputs, the value chain activities use different combinations of ITIL practices (sets of resources for performing certain types of work), drawing on internal or third-party resources, processes, skills, and competencies as required. For example, the engage activity might draw on supplier management, service desk management, relationship management, and service request management to respond to new demands for products and services, or information from various stakeholders (see Chapter 5 for more information on practices).

Regardless of which practices are deployed, there are some common rules when using the service value chain:

- All incoming and outgoing interactions with parties external to the value chain are performed via *engage*
- All new resources are obtained through *obtain/build*
- Planning at all levels is performed via *plan*
- Improvements at all levels are initiated and managed via *improve*.

To carry out a certain task or respond to a particular situation, organizations create service value streams. These are specific combinations of activities and practices, and each one is designed for a particular scenario. Once designed, value streams should be subject to continual improvement.

A value stream might, for example, be created for a situation where a user of a service needs an incident to be resolved. The value stream will be designed specifically to resolve this issue, and will provide a complete guide to the activities, practices, and roles involved. A more detailed outline of this and other examples of value streams can be found in Appendix A.

Example of a service value chain, its practices, and value streams

A mobile application development company has a value chain, enabling the full cycle of application development and management, from business analysis to development, release, and support. The company has developed a number of practices, supported with specialized resources and techniques:

- business analysis
- development
- testing
- release and deployment

- support.

Although the high-level steps are universal, different products and clients need different streams of work. For example:

- The development of a new application for a new client starts with initial engagement (pre-sale), then proceeds to business analysis, prototyping, the drawing up of agreements, development, testing, and eventually to release and support.
- Changing an existing application to meet new requirements of existing clients does not include pre-sale and involves business analysis, development, testing, and support in a different way.
- Fixing an error in a live application may be initiated in support, proceed with rolling back to a previous stable version (release), then moves to development, testing, and release of a fix.
- Experiments with new or existing applications to expand the target audience may start with innovation planning and prototyping, then proceed to development, and eventually to a pilot release for a limited group of users to test their perception of the changes made.

These are examples of value streams: they combine practices and value chain activities in various ways to improve products and services and increase potential value for the consumers and the organization.

ITSM in the modern world: Agile ITSM

For an organization to be successful, it must be able to adapt to changing circumstances while remaining functional and effective. This might include changes to the products and services it provides and consumes, as well as changes to its structure and practices. In the modern world, where IT is essential for all organizations, IT and IT management are expected to be Agile.

For many IT professionals, agility refers to software development and is associated with the Agile Manifesto, proclaimed in 2001. The manifesto promoted new approaches to software development, and valued customer experience, collaboration, and rapid changes over detailed planning and documentation, controls, and requirements. Agile software development methods have been adopted by many companies and software teams since then, and in many cases have proven to be effective.

Agile software development usually includes:

- continually evolving requirements, collected through feedback analysis and

direct observation

- breaking development work into small increments and iterations
- establishing product-based cross-functional teams
- visually presenting (Kanban) and regularly discussing (daily stand-ups) work progress
- presenting a working (at least, the minimum viable) software to the stakeholders at the end of each iteration.

If applied successfully, Agile software development enables fast responses to the evolving needs of service consumers. However, in many organizations, Agile software development has not provided the expected benefits, often due to lack of Agile methods in the other phases of the service lifecycle. This fragmented agility makes little sense for the organization, as the overall performance of the value chain is defined by that of the slowest part. A holistic approach to the service value chain should be adopted to make sure that the service provider is Agile throughout the service lifecycle. This means that agility should become a quality of all service management dimensions and all service value chain activities.

One of the greatest obstacles to service value chain agility used to be the rigidity of infrastructure solutions. It could take months to deploy the necessary infrastructure for a new software program, which made all development agility invisible and irrelevant for the service consumer. This problem has, to a great extent, been solved as technology has evolved. Virtualization, fast broadband and mobile connections, and cloud computing have allowed organizations to treat their IT infrastructure as a service or as a code, thus providing infrastructure changes with a velocity that was previously only possible for software. Once the technical problem was resolved, Agile methods could be applied to infrastructure configuration and deployment. This stimulated integration between software and infrastructure teams, and consequently between development and operations.

Many principles of Agile development can and should be applied to service operations and support. Operational changes and service requests can be handled in small iterations by dedicated product or service-focused teams, with constant feedback and high visibility. Daily operational activities can and should be visible and prioritized together with other tasks. All service management activities can and should continually provide, collect, and process feedback.

Agility is not a software development feature; it is an important quality of organizations in their entirety. Agile activities require Agile funding and adjusted financial and compliance controls, Agile resourcing, Agile contracting, Agile procurement, etc. If being Agile is adopted as a key principle, an organization should be able to survive and prosper in a constantly changing

environment. Applied in a fragmented way, Agile methods can become a costly and wasteful complication.

The ITIL story: Value chains and value streams

Henri: *At Axle Car Hire, the value chain is the way that our company operates. It has multiple value streams. Each value stream adopts and adapts the activities of the value chain for carrying out particular tasks. For example, there is one value stream for innovation, and another for providing standard services to existing customers.*

The value stream for providing standard services to existing customers represents the activities that are carried out when a customer hires a car. This starts with engagement, when a customer contacts Axle, and then proceeds to delivery, when they receive a car (although engagement can still happen at this stage).

Some value chain activities may be ongoing throughout a particular value stream, or may not be involved at all. In this stream, planning activity is continuous, but design and procurement activities will typically not be involved. The stream ends with more engagement activities, when cars are returned by customers, feedback is given, and orders are closed.

Marco: *Value chain activities do not have to happen in a particular order. Axle's innovation value stream is triggered by opportunity, and then goes to planning, designing, building or obtaining, transitioning, and finally to delivering. This stream often includes procurement activities. For example, we procure software and hardware for our biometric solutions.*

Henri: *We manage value streams for different objectives, combining the value chain activities and supporting them with practices. Every value stream should be effective and efficient, and subject to continual improvement.*

The following sections outline the value chain activities and define the purpose, inputs, and outputs for each. As each value stream is made up of a different combination of activities and practices, the inputs and outputs listed will not always apply, as they are specific to particular value streams. For example, the 'strategic, tactical, and operational plans' output of the plan value chain activity is formed as a result of strategic, tactical, and operational planning respectively. Each of these levels is likely to involve different resources, have a different planning cycle, and be triggered by different events. The lists of inputs and outputs given are not prescriptive, and they can and should be adjusted when organizations design their value streams.

4.5.1 Plan

Key message

The purpose of the plan value chain activity is to ensure a shared understanding of the vision, current status, and improvement direction for all four dimensions and all products and services across the organization.

The key inputs to this activity are:

- policies, requirements, and constraints provided by the organization's governing body
- consolidated demands and opportunities provided by *engage*
- value chain performance information, improvement status reports, and improvement initiatives from *improve*
- knowledge and information about new and changed products and services from *design and transition*, and *obtain/build*
- knowledge and information about third-party service components from *engage*.

The key outputs of this activity are:

- strategic, tactical, and operational plans
- portfolio decisions for *design and transition*
- architectures and policies for *design and transition*
- improvement opportunities for *improve*
- a product and service portfolio for *engage*
- contract and agreement requirements for *engage*.

4.5.2 Improve

Key message

The purpose of the improve value chain activity is to ensure continual improvement of products, services, and practices across all value chain activities and the four dimensions of service management.

The key inputs to this value chain activity are:

- product and service performance information provided by *deliver and support*
- stakeholders' feedback provided by *engage*
- performance information and improvement opportunities provided by all value chain activities
- knowledge and information about new and changed products and services from *design and transition*, and *obtain/build*
- knowledge and information about third-party service components from *engage*.

The key outputs of this value chain activity are:

- improvement initiatives for all value chain activities
- value chain performance information for *plan* and the governing body
- improvement status reports for all value chain activities
- contract and agreement requirements for *engage*
- service performance information for *design and transition*.

4.5.3 Engage

Key message

The purpose of the engage value chain activity is to provide a good understanding of stakeholder needs, transparency, and continual engagement and good relationships with all stakeholders.

The key inputs to this value chain activity are:

- a product and service portfolio provided by *plan*
- high-level demand for services and products provided by internal and external customers
- detailed requirements for services and products provided by customers

- requests and feedback from customers
- incidents, service requests, and feedback from users
- information on the completion of user support tasks from *deliver and support*
- marketing opportunities from current and potential customers and users
- cooperation opportunities and feedback provided by partners and suppliers
- contract and agreement requirements from all value chain activities
- knowledge and information about new and changed products and services from *design and transition*, and *obtain/build*
- knowledge and information about third-party service components from suppliers and partners
- product and service performance information from *deliver and support*
- improvement initiatives from *improve*
- improvement status reports from *improve*.

The key outputs of this value chain activity are:

- consolidated demands and opportunities for *plan*
- product and service requirements for *design and transitio*n
- user support tasks for *deliver and support*
- improvement opportunities and stakeholders' feedback for *improve*
- change or project initiation requests for *obtain/build*
- contracts and agreements with external and internal suppliers and partners for *design and transition*, and *obtain/build*
- knowledge and information about third-party service components for all value chain activities
- service performance reports for customers.

4.5.4 Design and transition

Key message

The purpose of the design and transition value chain activity is to ensure that products and services continually meet stakeholder expectations for quality, costs, and time to market.

The key inputs to this activity are:

- portfolio decisions provided by *plan*
- architectures and policies provided by *plan*
- product and service requirements provided by *engage*
- improvement initiatives provided by *improve*
- improvement status reports from *improve*
- service performance information provided by *deliver and support*, and *improve*
- service components from *obtain/build*
- knowledge and information about third-party service components from *engage*
- knowledge and information about new and changed products and services from *obtain/build*
- contracts and agreements with external and internal suppliers and partners provided by engage.

The key outputs of this activity are:

- requirements and specifications for *obtain/build*
- contract and agreement requirements for *engage*
- new and changed products and services for *deliver and support*
- knowledge and information about new and changed products and services to all value chain activities
- performance information and improvement opportunities for *improve*.

4.5.5 Obtain/build

Key message

The purpose of the obtain/build value chain activity is to ensure that service components are available when and where they are needed, and meet agreed specifications.

The key inputs to this activity are:

- architectures and policies provided by *plan*
- contracts and agreements with external and internal suppliers and partners

provided by *engage*

- goods and services provided by external and internal suppliers and partners
- requirements and specifications provided by d*esign and transition*
- improvement initiatives provided by *improve*
- improvement status reports from *improve*
- change or project initiation requests provided by *engage*
- change requests provided by *deliver and support*
- knowledge and information about new and changed products and services from *design and transition*
- knowledge and information about third-party service components from *engage*.

The key outputs of this activity are:

- service components for *deliver and support*
- service components for *design and transitio*n
- knowledge and information about new and changed service components to all value chain activities
- contract and agreement requirements for *engage*
- performance information and improvement opportunities for *improve*.

4.5.6 Deliver and support

Key message

The purpose of the deliver and support value chain activity is to ensure that services are delivered and supported according to agreed specifications and stakeholders' expectations.

The key inputs to this activity are:

- new and changed products and services provided by *design and transition*
- service components provided by *obtain/build*
- improvement initiatives provided by *improv*e
- improvement status reports from *improve*
- user support tasks provided by *engage*

- knowledge and information about new and changed service components and services from *design and transition*, and *obtain/build*
- knowledge and information about third-party service components from *engage*.

The key outputs of this activity are:

- services delivered to customers and users
- information on the completion of user support tasks for *engage*
- product and service performance information for *engage* and *improve*
- improvement opportunities for *improve*
- contract and agreement requirements for *engage*
- change requests for *obtain/build*
- service performance information for *design and transition*.

Further details on the service value chain activities can be found in other ITIL 4 publications and supplementary materials.

4.6 Continual improvement

Continual improvement takes place in all areas of the organization and at all levels, from strategic to operational. To maximize the effectiveness of services, each person who contributes to the provision of a service should keep continual improvement in mind, and should always be looking for opportunities to improve.

The continual improvement model applies to the SVS in its entirety, as well as to all of the organization's products, services, service components, and relationships. To support continual improvement at all levels, the ITIL SVS includes:

- the ITIL continual improvement model, which provides organizations with a structured approach to implementing improvements
- the improve service value chain activity, which embeds continual improvement into the value chain
- the continual improvement practice, supporting organizations in their day-to-day improvement efforts.

The ITIL continual improvement model can be used as a high-level guide to support improvement initiatives. Use of the model increases the likelihood that ITSM initiatives will be successful, puts a strong focus on customer value, and ensures that improvement efforts can be linked back to the organization's vision. The model supports an iterative approach to improvement, dividing work into manageable pieces with separate goals that can be achieved incrementally.

Figure 4.3 provides a high-level overview of the ITIL continual improvement model.

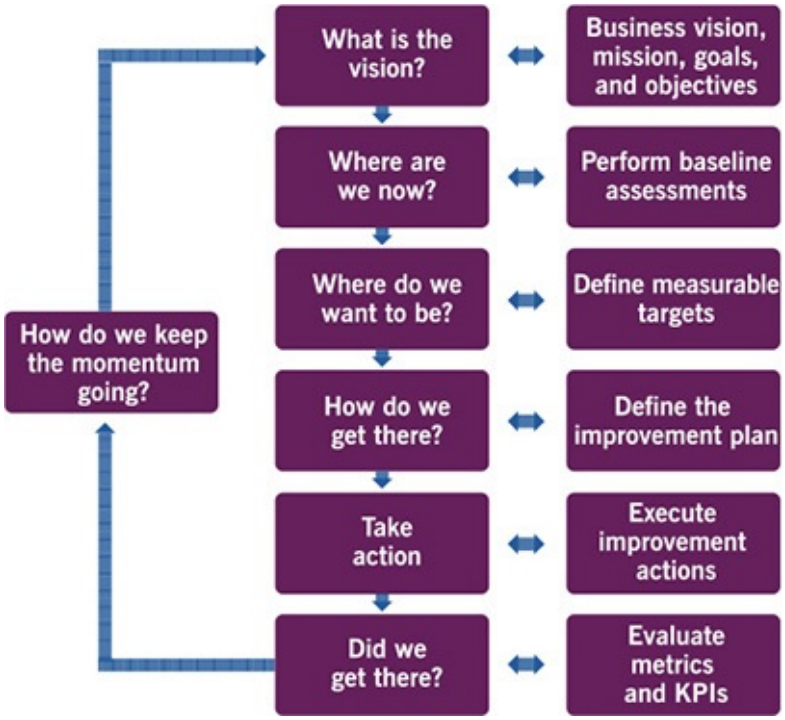

Figure 4.3 The continual improvement model

The ITIL story: Improving Axle

Henri would like Axle to become a greener company and introduce more environmentally friendly practices into its work. Over the following sections the Axle team uses the steps of the continual improvement model to implement changes to the organization.

Henri: *At Axle we strive for continual improvement at all levels. One of our objectives is to be a greener business and incorporate sustainable principles into every business decision. My team is committed to this initiative. As part of our service relationship model, our partners and suppliers are also involved in this.*

It is important to remember that the scope and details of each step of the model will vary significantly based on the subject and the type of improvement. It should be recognized that this model can serve as a workflow, but it can also be used simply as a high-level reminder of a sound thought process to ensure improvements are properly managed. The flow seeks to ensure that improvements are linked to the organization's goals and are properly prioritized, and that improvement actions produce sustainable results.

Logic and common sense should always prevail when using the continual improvement model. The steps of this model do not need to be carried out in a

linear fashion, and it may be necessary to re-evaluate and return to a previous step at some point. Critical judgement should always be applied when using this model.

4.6.1 Steps of the continual improvement model

This section provides more detail on each step of the continual improvement model. An organization can adjust these steps to its culture and goals. The model is simple and flexible, and can just as easily be used in an Agile culture as in a more traditional waterfall culture.

4.6.4.1 Step 1: What is the vision?

Key message

Each improvement initiative should support the organization's goals and objectives. The first step of the continual improvement model is to define the vision of the initiative. This provides context for all subsequent decisions and links individual actions to the organization's vision for the future.

This step focuses on two key areas:

- The organization's vision and objectives need to be translated for the specific business unit, department, team, and/or individual, so that the context, objectives, and boundaries for any improvement initiative are understood.
- A high-level vision for the planned improvement needs to be created.

The work within this step should ensure that:

- the high-level direction has been understood
- the planned improvement initiative is described and understood in that context
- the stakeholders and their roles have been understood
- the expected value to be realized is understood and agreed
- the role of the person or team responsible for carrying out the improvement is clear in relation to achieving the organization's vision.

If this step is skipped, improvements might only be optimized for the people or teams involved rather than the whole organization, or non-value-adding activities might become the sole focus of improvements.

The ITIL story: What is the vision?

Henri: *Axle's vision is for the business to become one of the top three green car-hire companies globally. A continual improvement initiative called Axle Green was created for this purpose.*

Craig: *As a supplier of cleaning services to Axle, I'll support them in this improvement initiative.*

4.6.1.2 Step 2: Where are we now?

Key message

The success of an improvement initiative depends on a clear and accurate understanding of the starting point and the impact of the initiative. An improvement can be thought of as a journey from Point A to Point B, and this step clearly defines what Point A looks like. A journey cannot be mapped out if the starting point is not known.

A key element in this step is a current state assessment. This is an assessment of existing services, including the users' perception of value received, people's competencies and skills, the processes and procedures involved, and/or the capabilities of the available technological solutions. The organization's culture, i.e. the prevailing values and attitudes across all stakeholder groups, also needs to be understood to decide what level of organizational change management is required.

Current state assessments should be done through objective measurement whenever possible. This will allow for an accurate understanding of the issues associated with the current state and, once the initiative is implemented, enable proper measurement of the level of improvement achieved by comparison with the initial state. If a good measurement system is in place, the information to fulfil this step may already have been provided when the proposed improvement was initially documented.

If this step is skipped, the current state will not be understood and there will not be an objective baseline measurement. It will therefore be difficult to track and measure the effectiveness of the improvement activities, as the new state cannot

be compared with a previous state at a later point.

The ITIL story: Where are we now?

Su: *We need to understand the baseline. How do we know if we've improved, if we don't know where we started? Currently, only 5 per cent of the vehicles in our fleet are electric.*

Craig: *Only 20 per cent of my cleaning products are biodegradable.*

4.6.1.3 Step 3: Where do we want to be?

Key message

Just as the previous step (Step 2) describes Point A on the improvement journey, Step 3 outlines what Point B, the target state for the next step of the journey, should look like. A journey cannot be mapped out if the destination is not clear.

Based on the results of the first two steps, a gap analysis can be performed, which evaluates the scope and nature of the distance to be travelled from the starting point to the achievement of the initiative's vision. It is important to note that the initial vision of the initiative is aspirational and may never be achieved in full. Improvement is the goal, not perfection. This step should define one or more prioritized actions along the way to completing the vision for the improvement, based on what is known at the starting point. Improvement opportunities can be identified and prioritized based on the gap analysis, and improvement objectives can be set, along with critical success factors (CSFs) and key performance indicators (KPIs).

The agreed objectives, CSFs, and KPIs need to follow what is known as the SMART principle. They should be specific, measurable, achievable, relevant, and time-bound. It is much easier to define the route of the improvement journey if the exact destination is known. It is important to note that the target state represents progress towards the vision, not the achievement of the entire vision.

If this step is skipped, the target state will remain unclear. It will be difficult to prepare a satisfactory explanation of what key stakeholders stand to gain from the improvement initiative, which may result in low support or even pushback.

The ITIL story: Where do we want to be?

Su: *Within five years, we want 50 per cent of our fleet to consist of electric vehicles. The other half should comply with the strictest ecological requirements for petrol and diesel cars.*

Craig: *One of my targets is that 90 per cent of my cleaning products will be biodegradable within the next two years.*

Radhika: *This is a great initiative. In our IT team, we want to use biodegradable cups. We would also like Axle to use environmentally friendly light bulbs in all our offices.*

4.6.1.4 Step 4: How do we get there?

Now that the start and end points of the improvement journey have been defined, a specific route can be agreed. Based on the understanding of the vision of the improvement and the current and target states, and combining that knowledge with subject matter expertise, a plan for addressing the challenges of the initiative can be created.

Key message

The plan for Step 4 can be a straightforward and direct route to completing a single simple improvement, or it may be more involved. The most effective approach to executing the improvement may not be clear, and it will sometimes be necessary to design experiments that will test which options have the most potential.

Even if the path to follow is clear, it may be most effective to carry out the work in a series of iterations, each of which will move the improvement forward part of the way. With each iteration, there is an opportunity to check progress, re-evaluate the approach, and change direction if appropriate.

If this step is skipped, the execution of the improvement is likely to flounder and fail to achieve what is required of it. Failed improvements erode confidence and can make it difficult to get support for future improvements.

The ITIL story: How do we get there?

Craig: *My plan is to replace our current stocks of cleaning products with biodegradable options as we run out. Meanwhile, we'll test new products to find the optimal balance of price and quality.*

Su: *Sometimes knowing how you get there is easy, but replacing half of our fleet with electric cars is a bigger challenge. We don't want excess cars in our car lots if they're not being used. We must also consider specifics and infrastructure in different countries, as well as local regulations.*

Radhika: *We're encouraging the use of ceramic cups over plastic ones. We're discontinuing the purchase of plastic cups, and we are buying ceramic cups for all our offices.*

4.6.1.5 Step 5: Take action

Key message

In Step 5 the plan for the improvement is acted upon. This could involve a traditional waterfall-style approach, but it could be more appropriate to follow an Agile approach by experimenting, iterating, changing directions, or even going back to previous steps.

Some improvements take place as part of a big initiative that makes a lot of change, whereas other improvements are small but significant. In some cases, a larger change is effected through the implementation of multiple smaller improvement iterations. Even if the path to complete the improvement seemed clear when it was planned, it is important to remain open to change throughout the approach. Achieving the desired results is the objective, not rigid adherence to one view of how to proceed.

During the improvement, there needs to be continual focus on measuring progress towards the vision and managing risks, as well as ensuring visibility and overall awareness of the initiative. ITIL practices such as organizational change management (section 5.1.6), measurement and reporting (section 5.1.5), risk management (section 5.1.10) and, of course, continual improvement (section 5.1.2) are important factors in achieving success in this step.

Once this step is completed, the work will be at the end point of the journey, resulting in a new current state.

The ITIL story: Take action

Craig: *We have started to replace our stocks of cleaning products with biodegradable options. We've found some great new products to use, and even managed to save money by using cheaper alternatives that don't compromise on quality.*

Su: *We have started to phase out some of our older petrol and diesel cars and replace them with new electric models. We have carried out a thorough check of the petrol and diesel cars we are keeping to ensure they meet ecological requirements, and will take action to fix this where they do not.*

Radhika: *We have brought the new biodegradable cups and environmentally friendly light bulbs into our offices and started to remove the plastic cups.*

4.6.1.6 Step 6: Did we get there?

This step involves checking the destination of the journey to be sure that the desired point has been reached.

Key message

Too often, once an improvement plan is set in motion, it is assumed that the expected benefits have been achieved, and that attention can be redirected to the next initiative. In reality, the path to improvement is filled with various obstacles, so success must be validated.

For each iteration of the improvement initiative, both the progress (have the original objectives been achieved?) and the value (are those objectives still relevant?) need to be checked and confirmed. If the desired result has not been achieved, additional actions to complete the work are selected and undertaken, commonly resulting in a new iteration.

If this step is skipped, it is hard to be sure whether the desired or promised outcomes were actually achieved, and any lessons from this iteration, which would support a course correction if needed, will be lost.

The ITIL story: Did we get there?

Craig: *After a few months we managed to hit our target of having 90 per cent of our products being biodegradable.*

Su: *The electric cars are being introduced, but for logistical reasons it is proving more difficult to replace the petrol and diesel cars than we had anticipated. We will need to do this at a faster pace if we want to hit our five-year target. We may now have to reconsider our target, and decide whether we should do more to support it, or if it needs to be revised.*

Radhika: *Our offices now have biodegradable cups and environmentally friendly light bulbs. Some of the old plastic cups are still being used, but we have stopped purchasing more, so once they run out they'll be gone.*

4.6.1.7 Step 7: How do we keep the momentum going?

Key message

If the improvement has delivered the expected value, the focus of the initiative should shift to marketing these successes and reinforcing any new methods introduced. This is to ensure that the progress made will not be lost and to build support and momentum for the next improvements.

The organizational change management and knowledge management practices should be used to embed the changes in the organization and ensure that the improvements and changed behaviours are not at risk of reversion. Leaders and

managers should help their teams to truly integrate new work methods into their daily work and institutionalize new behaviours.

If the expected results of the improvement were not achieved, stakeholders need to be informed of the reasons for the failure of the initiative. This requires a thorough analysis of the improvement, documenting and communicating the lessons learned. This should include a description of what can be done differently in the next iteration, based on the experience gathered. Transparency is important for future efforts, regardless of the results of the current iteration.

If this step is skipped, then it is likely that improvements will remain isolated and independent initiatives, and any progress made may be lost over time. It may also be difficult to get support for future improvements, and embed continual improvement in the organization's culture.

The ITIL story: How do we keep the momentum going?

Craig: *Now that we have hit our target we will monitor any new products we buy to ensure that they meet our standards of being biodegradable. We will also be on the lookout for any opportunities to replace our remaining non-biodegradable products with more environmentally friendly alternatives.*

Su: *We've made a great start on adding new electric vehicles to the Axle fleet, but haven't hit our targets yet. Now we need to analyse what has prevented us from reaching our objectives, record what lessons we have learned, and decide what can be done differently in the future to make the introduction of electric cars more effective.*

Radhika: *We will continue to buy ceramic cups and environmentally friendly light bulbs for our offices. We will also consider further ways to make our offices greener, and run campaigns with staff members to encourage them to become more environmentally aware.*

4.6.2 Continual improvement and the guiding principles

Following the continual improvement model, an organization may significantly benefit from applying the ITIL guiding principles. All the principles are applicable and relevant at every step of an improvement initiative. However, some of the guiding principles are especially relevant to specific steps of the continual improvement model. Following these principles at every step of an improvement increases the chances for success of the steps and the overall improvement initiative. Table 4.2 outlines to which steps of the continual improvement model each of the guiding principles is particularly relevant, although all principles are applicable to all steps at some level.

Continual improvement is not only an integral part of Lean, but also Agile (retrospectives), DevOps (continual experimentation and learning, and mastery), and other frameworks. It is one of the key components of the ITIL SVS, providing, along with the guiding principles, a solid platform for successful service management.

Table 4.2 The steps of the continual improvement model linked to the most relevant ITIL guiding principles

	Focus on value	Start where you are	Progress iteratively with feedback	Collaborate and promote visibility	Think and work holistically	Keep it simple and practical	Optimize and automate
What is the vision?	✔	✔	✔	✔	✔	✔	✔
Where are we now?	✔	✔	✔	✔	✔	✔	✔
Where do we want to be?	✔	✔	✔	✔	✔	✔	✔
How do we get there?	✔	✔	✔	✔	✔	✔	✔
Take action	✔	✔	✔	✔	✔	✔	✔
Did we get there?	✔	✔	✔	✔	✔	✔	✔
How do we keep the momentum going?	✔	✔	✔	✔	✔	✔	✔

Continual improvement and the theory of constraints

In an increasingly dynamic business environment, an enterprise's ability to change quickly, whether in response to external factors or to disrupt the market, can make the difference between failure and success.

When planning improvements, it is crucial to focus on the work that is the highest priority. According to the theory of constraints (ToC), the weakest link in the value chain determines the flow and throughput of the system. The weakest link must be elevated as much as possible (sometimes revealing a new weakest link), and all the other steps in the value chain must be organized around it.

The weakest link of a value stream can be determined with value stream mapping. This is a Lean practice that examines the stream, quantifies its waste (for example, a delay), and in so doing, identifies its weakest link. If the weakest link is the development of information systems, then the application of Agile principles and practices can improve the quality of, and the speed with which, functionality is developed. This includes the critical interaction between business and IT in which the required functionality is defined alongside the non-functional requirements. The ITIL 4 practices that help with this include, among others, software development and management, business analysis, and relationship management.

If the weakest link is the speed and reliability of deployment, then using DevOps principles, technical practices and tools can make a significant difference. The ITIL 4 practices that are relevant to this include deployment

management, release management, and organizational change management.

Finally, if the weakest link is the delivery and support of IT services, then IT operations practices and tools can be used, such as the ITIL 4 practices of incident management, problem management, service desk, and infrastructure and platform management.

4.7 Practices

A practice is a set of organizational resources designed for performing work or accomplishing an objective. These resources are grouped into the four dimensions of service management (see Chapter 3). The ITIL SVS includes general management, service management, and technical management practices, as described in Chapter 5.

4.8 Summary

The ITIL SVS describes how all the components and activities of the organization work together as a system to enable value creation. Each organization's SVS has interfaces with other organizations, forming an ecosystem that facilitates value creation for the organizations, their customers, and other stakeholders.

The ITIL SVS is a powerful holistic construct for the governance and management of modern products and services that enables organizations to co-create value with consumers. The SVS includes the service value chain activities supported by universal and holistic practices that allow the organization to manage demands of all types. These range from strategic demands that enable the organization to thrive in a competitive landscape, to operational requests for information, services, or support. Every organization participates in some form of the value chain activities described here, even when many of them are performed by suppliers and partners. ITIL 4 guidance can be adapted and adopted to facilitate value, feedback, and continual improvement across the SVS.